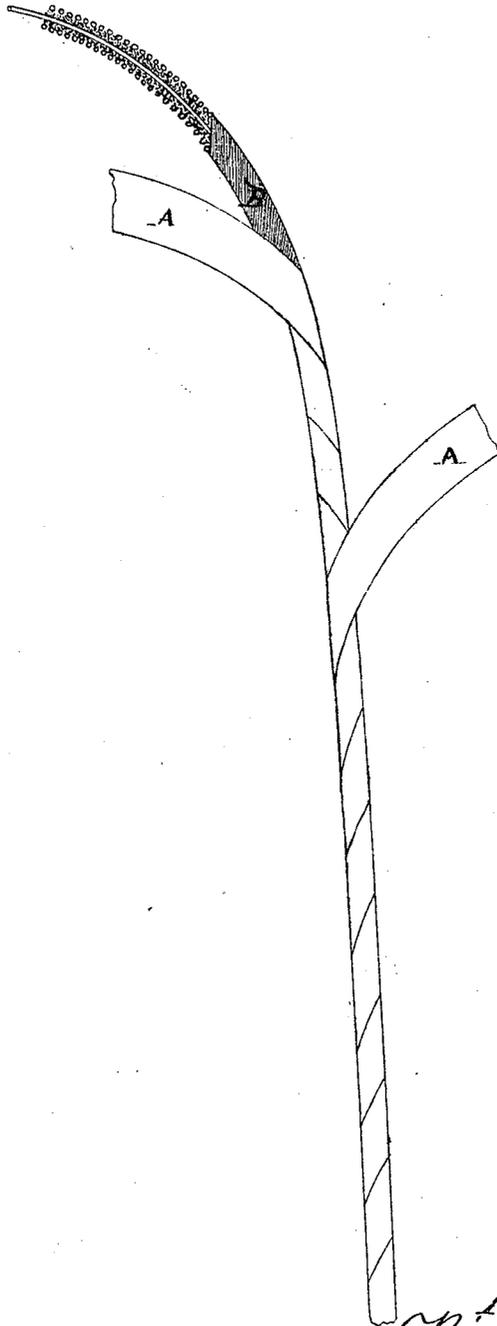


R. UREN.

Improvement in Blasting-Fuzes.

No. 114,233.

Patented April 25, 1871.



Witnesses.
Geo. H. Strong
Wm. A. Rumbel

Inventor
Richard Uren
By his attys
Dewey & Co

United States Patent Office.

RICHARD UREN, OF SANTA CRUZ, CALIFORNIA.

Letters Patent No. 114,233, dated April 25, 1871.

IMPROVEMENT IN BLASTING-FUSES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, RICHARD UREN, of city and county of Santa Cruz, State of California, have invented an Improved Safety-Fuse; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to an improved article of safety-fuse which can be manufactured at a less cost than the ordinary fuse heretofore made; and it consists in producing a fuse which is composed of only one layer of yarn instead of two.

This we accomplish with a machine which was patented by Richard Uren, Thomas Dunstone, and Joseph Blight on the 2d day of December, 1862.

In the ordinary method of manufacturing safety-fuse it is necessary, while twisting the first or main rope, inside of which the powder is confined, to twine around it in an opposite direction one or more strands or yarns, which are called counter-yarns, in order that

the rope shall not untwist when taken from the drum upon which it is wound in preparing and covering it with the tapes.

With the machine above mentioned we are enabled to dispense with winding the rope with the counter-twine by accomplishing the entire operation at once, winding the outer or covering-tapes A instead of the counter-twines, thereby saving the expense of the counter-twines and making an equally durable and effective safety-fuse.

Having described my invention,

What I claim, and desire to secure by Letters Patent, is—

The combination of the inner yarns B and covering-tapes A with suitable filling in the manufacture of safety-fuses, substantially as described.

In witness whereof I have hereunto set my hand and seal.

RICHARD UREN. [L. S.]

Witnesses:

J. L. BOONE,
GEO. H. STRONG.